

NOTE UPON *OLIVA GIBBOSA*, BORN, AND ITS LIMITS OF VARIATION.

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THIS well-known and very conspicuous mollusc, whose headquarters have been reported as tropical West African,<sup>1</sup> but which nevertheless seems to have a wide distribution over a great portion of the extensive Indo-Pacific province, having been reported from Ceylon, Andaman Islands (Booley), Mauritius (Barelay), Mergui Archipelago (Anderson), and the Philippines, may, in its typical form, be described as a broad, massive shell, a fine example measuring a good  $3\frac{1}{4}$  inches to even  $3\frac{1}{2}$  longitudinally by  $1\frac{1}{2}$  inches in breadth, the normal coloration being a livid mottled grey, the broad basal fasciole ochreous, much spotted or suffused with cinereous. When the outer cuticle is removed, the mottled surface shows much more clearly, the colour then being a fine chocolate or sepia. The white spaces are seen to be mostly narrow, long, often triangular or cuneiform, or shaped like the letter L.



The spire and the whole of the columellar region exhibit an unusual amount of callosity. On the one hand, its nearest approaches, through its most cylindrical variety, are the closely allied *O. nebulosa*, Lamk., a species so identical in colour and marking as to suggest a common ancestor, and *O. intricata*, Marrat, by many considered only a variety of *nebulosa*, Lamk., though to my mind it seems peculiar in its marking. On the other side, the still more massive *Olivancillaria Brasiliana*, Lamk., from the New World, is nearly allied, but the sutural canaliculations in *gibbosa* form an undoubted line of demarcation here.

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<sup>1</sup> Probably on insufficient grounds. Specimens so labelled in the Cumingian Collection may not be correct.

The following is the synonymy :—

*Voluta gibbosa*, Born, Test. Mus. Cæs., p. 215.

*Oliva cingulata*, Chemnitz, x, pp. 1369–70.

*Voluta utriculus*, Gmelin, Syst. Nat., p. 3441.

*Oliva utriculus* (Gmel.), Lamk., Ann. du Mus., xvi, p. 323.

*Oliva gibbosa* (Born), Reeve, Conch. Icon., *Oliva*, pl. viii, figs. 12a–b.

*Anazola gibbosa*, Gray, List of Mollusca Brit. Mus., 1865.

*Utriculina utriculus* (Gmel.), Gray.

Placed by some authors in the genus *Olivancillaria*, by others it is considered an *Agaronia*.

Three distinct varieties, in colour and marking, occur, which may be characterized thus :—

(a) *Flavescens*.—Shell of a pale stramineous or yellow hue, sometimes suffused with orange or fulvous, the mottled markings as in the type.

(b) *Fulgurans*.—Markings in zigzag longitudinal lines, the spaces between clear and plain. I have never noticed this variation in the typical livid-grey form. I fancy it may be restricted in its habitat to the Philippines and other Eastern islands. It is figured in Reeve (l.c., fig. 12b) as collected by the late Mr. Hugh Cuming. To the type it bears much the same relationship as *O. intricata* does to *O. nebulosa*, Lamk.

(c) *Candicans*.—Mr. J. M. Williams, of Liverpool, whose collection of the genus is probably the finest extant, possesses a pure albino example, typical in form. It was procured in France, and, so far, is unique.

In addition to these, an extraordinary monstrosity of the typical shell exists, in which the basal fasciole is reproduced across the centre of the body-whorl, the result being very striking. About fourteen years ago, in November, 1889, I exhibited the specimen from my collection, now shown, at a meeting of the Manchester Literary and Philosophical Society, and then proposed for it the name var. monstr. *mediocincta*. Since then I have seen two other examples of the same abnormality, but where I cannot now recollect, and Mr. G. B. Sowerby has kindly allowed me to inspect a very large and fine example, with the additional fasciole particularly well developed. The example I have was formerly in the collection of Mr. John Dennison, of Liverpool. It formed one of “20 Olivas, various,” sold at Stevens’ Auction Rooms on April 24th, 1865, being lot 23 in the sale. Mr. F. P. Marrat, author of the monograph “*Oliva*” in Sowerby’s Thes. Conch., catalogued this collection, and it is curious he did not specially mention such a wonderful anomaly as is presented by this specimen.

*Clanophila gibbosa*, Gray (Proc. Zool. Soc., 1858, p. 48) = *Oliva clanophila*, Duclos, Mon., t. xxix, fig. 89, must not be confounded with the present shell under discussion, being a variety, in all probability, of *O. auricularia*, Reeve, now included in *Olivancillaria*.